

This is a final set of biographical sketches for the members of the US EPA Science Advisory Board's Environmental Economics Advisory Committee who are available to participate on the panel for the Affordability review. The SAB determined that at this point it would be premature to bring invited treatment technology experts into the process because the need for their services is yet to be clearly identified. Additional information on the meeting, and review are included in a Federal Register Notice that was published on April 26, 2002 (FR 67, No. 81: 20765-20767).

Affordability Review Panel (Drinking Water Treatment Technologies for Small Systems)

Panel Biographical Sketches

Dr. Robert N. Stavins, Chair

Robert N. Stavins is the Albert Pratt Professor of Business and Government, Faculty Chair of the Environment and Natural Resources Program at the John F. Kennedy School of Government, Harvard University, and Director of the Environmental Economics Program at Harvard University. He is a University Fellow of Resources for the Future, the Chairman of the Environmental Economics Advisory Committee of the U.S. Environmental Protection Agency's (EPA) Science Advisory Board, Director of the University-wide Environmental Economics Program at Harvard University; and a Member of: EPA's Clean Air Act Advisory Committee, the Intergovernmental Panel on Climate Change (IPCC), the Board of Directors of the Robert and Renée Belfer Center for Science and International Affairs, the Executive Committee of the Harvard University Committee on Environment (UCE), the Board of Academic Advisors of the AEI-Brookings Joint Center for Regulatory Studies, the Editorial Boards of *The Journal of Environmental Economics and Management*, *Resource and Energy Economics*, *Land Economics*, *Environmental Economics Abstracts*, *B.E. Journals of Economic Analysis & Policy*, and *Economic Issues*. He is also a contributing editor of *Environment*, and was formerly a member of the Board of Directors of the Association of Environmental and Resource Economists. He holds a B.A. in philosophy from Northwestern University, an M.S. in agricultural economics from Cornell, and a Ph.D. in economics from Harvard.

Professor Stavins' research has focused on diverse areas of environmental economics and policy, including examinations of: policy instrument choice under uncertainty; competitiveness effects of regulation; design and implementation of market-based policy instruments; diffusion of pollution-control technologies; and depletion of forested wetlands. His current research includes analyses of: technology innovation; environmental benefit valuation; political economy of policy instrument choice; and econometric estimation of carbon sequestration costs. His

research has appeared in the *American Economic Review*, *Journal of Economic Perspectives*, *Quarterly Journal of Economics*, *Journal of Economic Literature*, *Science*, *Nature*, *Journal of Environmental Economics and Management*, *Ecology Law Quarterly*, *Journal of Risk and Uncertainty*, *Resource and Energy Economics*, *The Energy Journal*, *Energy Policy*, *Annual Review of Energy and the Environment*, *Explorations in Economic History*, *Brookings Papers on Economic Activity*, other scholarly and popular periodicals, and several books. He is the editor of the fourth edition of *Economics of the Environment* (W. W. Norton, 2000), co-editor with Paul Portney of the second edition of *Public Policies for Environmental Protection* (Resources for the Future, 2000), and the author of *Environmental Economics and Public Policy: Selected Papers of Robert N. Stavins, 1988-1999* (Edward Elgar, 2000).

Professor Stavins directed Project 88, a bi-partisan effort co-chaired by former Senator Timothy Wirth and the late Senator John Heinz, to develop innovative approaches to environmental and resource problems. He continues to work closely with public officials on matters of national and international environmental policy. He has been a consultant to the National Academy of Sciences, several Administrations, Members of Congress, environmental advocacy groups, the World Bank, the United Nations, the U.S. Agency for International Development, state and national governments, and private foundations and firms.

Prior to coming to Harvard, Stavins was a staff economist at the Environmental Defense Fund; and before that, he managed irrigation development in the middle east, and spent four years working in agricultural extension in West Africa as a Peace Corps volunteer.

Professor Stavins' research support sources have included: the National Science Foundation, the U.S. Department of Energy, the U.S. Department of the Interior, the U.S. Environmental Protection Agency, the Avina Foundation, the Pew Center on Global Climate Change, the W. Alton Jones Foundation, the Pew Charitable Trusts, the Surdna Foundation, the Carnegie Corporation of New York, the Richard King Mellon Foundation, and Resources for the Future."

Dr. Dallas Burtraw

Dr. Burtraw is a Senior Fellow at Resources for the Future. He holds a Ph.D. in Economics and a Master in Public Policy from the University of Michigan.

Dr. Burtraw's areas of expertise include: air pollution, cost-benefit analysis, electricity restructuring, regulatory design, and public finance. His research interests include the restructuring of the electric utility market, the social costs of environmental pollution, benefit-cost analyses of environmental regulation, and the design of incentive-based environmental policies.

Recently, Dr. Burtraw analyzed the cost-effectiveness of various designs for NO_x emission trading in the eastern states and of the design for a carbon emission trading program in

the electricity sector. He also investigated the effects on electric utilities of the sulfur dioxide emissions-permit trading program legislated under the 1990 Amendments to the Clean Air Act, and evaluated the benefits of emission reductions resulting from the 1990 Amendments.

Dr. Burtraw's current activities include service on the National Research Council, Committee on Air Quality Management in the United States and serving as a reviewer, National Energy Modeling System, Energy Information Administration, 1992-present. His current projects include the study of integrated approaches to pollutant control in the electricity sector and the valuation of natural resource improvements in the Adirondacks.

Dr. Burtraw's research support for activities at Resources for the Future include the State of Maryland, the Environmental Protection Agency, the Department of Energy. Recent activities outside Resources for the Future include consulting for Analysis Group/Economics and Americans for Equitable Climate Solution.

Dr. Lawrence H. Goulder

Lawrence H. Goulder is the Shuzo Nishihara Professor in Environmental and Resource Economics at Stanford University. He is also a Senior Fellow of Stanford's Institute for International Studies and Institute for Economic Policy Research, a Research Associate at the National Bureau of Economic Research, and a University Fellow of Resources for the Future.

Dr. Goulder graduated from Harvard College with an A.B. in philosophy in 1973. He obtained a master's degree in musical composition from the Ecole Normale de Musique de Paris in 1975 and earned a Ph.D. in economics from Stanford in 1982. He was a faculty member in the Department of Economics at Harvard before returning to Stanford's economics department in 1989.

Dr. Goulder's research examines the environmental and economic impacts of U.S. and international environmental policies. He has focused on policies to reduce emissions of "greenhouse gases" that contribute to climate change, and on "green tax reform" – revamping the tax system to introduce taxes on pollution and reduce taxes on labor effort or investment. To analyze environmental policies Dr. Goulder often employs a general equilibrium analytical framework that integrates the economy and the environment and links the activities of government, industry, and households. His work considers both the aggregate benefits and costs of various policies as well as the distribution of policy impacts across industries, income groups, and generations. Some of his work is interdisciplinary, involving collaborations with climatologists and biologists. Dr. Goulder has conducted analyses for several government agencies and environmental organizations.

Dr. Goulder's research support sources have included the National Science Foundation, the U.S. Environmental Protection Agency, the U.S. Department of Energy, the William and

Flora Hewlett Foundation, the Pew Center on Global Climate Change, and Resources for the Future.

Dr. W. Michael Hanemann

Dr. W. Michael Hanemann is Chancellor's Professor in the Department of Agricultural and Resource Economics and Goldman School of Public Policy at the University of California, Berkeley. Dr. Hanemann was educated at Oxford University (B.A.), the London School of Economics (M. Sc.), Harvard University, (M.A. in Public Finance and Decision Theory. He holds a Ph.D. in Economics from Harvard University.

Dr. Hanemann's research interests include non-market valuation, environmental economics and policy, water pricing and management, demand modeling for market research and policy design, the economics of irreversibility and adaptive management, and welfare economics. His work has appeared in *AER*, *Econometrica*, *JEEM*, *AJAE*, and elsewhere.

Dr. Hanemann's recent publications have addressed valuation and management of tropical forests, temporal reliability of estimates from Contingent Valuation, referendum design and Contingent Valuation, the economic theory of WTP and WTA, and the statistical analysis of discrete-response, welfare analysis with discrete choice models.

Dr. Gloria E. Helfand

Dr. Helfand has been an Associate Professor of Environmental Economics in the School of Natural Resources and Environment (SNRE) at the University of Michigan (UM) since 1996. There she has taught undergraduate and graduate courses in environmental and resource economics and environmental policy analysis. She is a member of the Environmental Economics Advisory Committee of the U.S. Environmental Protection Agency's Science Advisory Board, an Associate Editor of the *American Journal of Agricultural Economics and Land Economics*, and she is stepping down due to sabbatical leave from her memberships in SNRE's Executive Committee, the Advisory Committee for the Program in the Environment, and the Executive Committee for the Corporate Environmental Management Program at UM.

Dr. Helfand holds a bachelor's degree in English Literature from Swarthmore College, a master's degree in Technology and Human Affairs from Washington University, and a Ph.D. in Agricultural and Resource Economics from the University of California at Berkeley. Prior to coming to the University of Michigan, she was an Assistant and Associate Professor of Agricultural Economics at the University of California at Davis. Dr. Helfand previously conducted economic and policy analysis on public lands issues, with an emphasis on national forest management, in the Economic Policy Department of The Wilderness Society, and she conducted research, analysis, and advocacy on national forest management and floodplain management issues for the Natural Resources Defense Council.

Dr. Helfand's expertise is in the area of understanding the effects of different regulatory approaches to pollution policy, environmental policy analysis, environmental justice, and non-point source pollution policy. She has published articles in such journals as the *American Journal of Agricultural Economics*, the *American Economic Review*, the *Journal of Environmental Economics and Management*, and *Social Science Quarterly*, and she is co-author (with John Loomis) of *Environmental Policy Analysis for Decision-Making*, published by Kluwer Academic Press.

Dr. Helfand's research support has come from the University of California at Davis (UCD), the UCD Institute of Transportation Studies, the University of California Water Resources center, the California State Water Resources Control Board, the U.S. Environmental Protection Agency, the University wide (University of California) Energy Research Group, the University of California Division of Agricultural and Natural Resources, the University of California Giannini Foundation of Agricultural Economics, and the National Science Foundation.

Dr. Catherine Kling

Dr. Catherine Kling is a Professor of Economics at Iowa State University and Head of the Resource and Environmental Policy Division of the Center for Agricultural and Rural Development at ISU. Prior to coming to Iowa State University in 1993, she was an Associate and Assistant Professor in the Department of Agricultural Economics at the University of California, Davis. She has taught graduate and undergraduate courses in environmental economics, microeconomic theory, and econometrics. Dr. Kling's research encompasses nonmarket valuation issues in environmental economics and economic incentives for pollution control related especially to agricultural problems. Her research has been published in a variety of economics journals including *The Review of Economics and Statistics*, *Journal of Public Economics*, *Journal of Environmental Economics and Management*, *American Journal of Agricultural Economics*, *Land Economics*, *Environmental and Resource Economics*, and *Ecological Economics*.

Dr. Kling has also served the profession and the public sector in a variety of capacities including her current membership on EPA's Environmental Economics Advisory Committee to the Science Advisory Board. Current and past service includes the member of the board of directors and awards committee chair for the American Agricultural Economics Association, vice president and member of the board of directors of the Association of Environmental and Resource Economists, associate editor for the *American Journal of Agricultural Economics*, and the *Journal of Environmental Economics and Management*, as well as numerous ad hoc committees for the AAEA, AERE, and other professional associations.

Dr. Kling's research support has been provided through grants from the Environmental Protection Agency, the Department of Agriculture, the California Institute for Energy Efficiency,

the Giannini Foundation, and the Sloan Foundation.

Dr. Richard B. Norgaard

Richard B. Norgaard is Professor of Energy and Resources and of Agricultural and Resource Economics at the University of California at Berkeley. He holds a PhD in Economics from the University of Chicago (1971), an MS in Agricultural Economics with a minor in water resources engineering from Oregon State University (1967), and an AB in Economics from the University of California at Berkeley (1965).

Professor Norgaard currently contributes to the fields of environmental epistemology (supported by an NSF Biocomplexity Grant), ecological economics, and neoclassical environmental economics. His research currently addresses how we understand complex, global issues with additional work being undertaken in the area of trade and the environment. His research over three decades has been wide ranging and has appeared in the journals and books of a number of disciplines beyond economics. He is the author of *Development Betrayed: The End of Progress and a Coevolutionary Revisioning of the Future* (Routledge, London, 1994) and co-author or editor of three additional books.

Professor Norgaard was a Project Specialist with the Ford Foundation in Brazil (1978 and 79) where he worked on the environmental problems of Amazon development. Among a variety of professional assignments around the world, he served on a UNDP economic assessment team in Vietnam (1989) and as a visiting scholar at the World Bank (1991).

Professor Norgaard currently holds the office of Past President of the International Society for Ecological Economics (2002-3) after serving as its President (1998-2001). He also serves on the Board of Directors of the American Institute of Biological Sciences, on the Board of Directors of Redefining Progress, an NGO he co-founded, and on the Board of Directors of EcoEquity. He has served (1992-98) on the U.S. Committee of the Scientific Committee on Problems of the Environment (SCOPE) and numerous committees of the National Research Council and former Office of Technology Assessment. Professor Norgaard's current research funding comes from the National Science Foundation and from the Agricultural Experiment Station, directly through the university.

Dr. Stephen Polasky

Dr. Stephen Polasky holds the Fesler-Lampert Chair in Ecological/Environmental Economics at the University of Minnesota. He is a faculty member of the Department of Applied Economics and a member of the graduate faculty of the Department of Ecology, Evolution and Behavior, the Department of Forest Resources and the Conservation Biology Program. He received his Ph.D. in economics from the University of Michigan in 1986. Prior to coming to Minnesota he held faculty positions in the Department of Agricultural and Resource Economics

at Oregon State University and the Department of Economics at Boston College. He was the senior staff economist for environment and resources for the President's Council of Economic Advisers 1998-1999. He served as associate editor and co-editor for the *Journal of Environmental Economics and Management* from 1996 to 2002. He is currently serving as a member of the Environmental Economics Advisory Committee of U.S. EPA'S Science Advisory Board. His research interests include biodiversity conservation and endangered species policy, integrating ecological and economic analysis, game theoretic analysis of natural resource use, common property resources, and environmental regulation. His research has been published in *Biological Conservation*, *Canadian Journal of Economics*, *International Economic Review*, *Journal of Economic Perspectives*, *Journal of Environmental Economics and Management*, *Science* and other journals. He recently edited a book entitled *The Economics of Biodiversity Conservation*.

Dr. Polasky has received funding from the USDA Forest Service for research on ecological, social and economic effects of land use, watershed management and open space. He has also received funding from US EPA to study watershed restoration, biodiversity conservation and land management questions. Several grants were from a joint NSF/EPA call for proposals.

Dr. Hilary Sigman

Hilary Sigman is an associate professor of economics at Rutgers University in New Brunswick and a faculty research fellow of the National Bureau of Economic Research. In Spring 2002, she is a visiting associate professor at the University of Michigan's Ford School of Public Policy. She currently serves on the Environmental Economics Advisory Committee of the U.S. Environmental Protection Agency's Science Advisory Board and the Editorial Council of the *Journal of Environmental Economics and Management*. She holds a B.A. in economics and Studies in the Environment from Yale College, an M.Phil. in economics from Cambridge University (U.K), and a Ph.D. in economics from the Massachusetts Institute of Technology. She was previously an associate professor of environmental economics at Yale, an assistant professor of economics at the University of California, Los Angeles, a Gilbert White Fellow at Resources for the Future, and a visiting fellow at the Hoover Institution. Her research examines the empirical effects of environmental policies, including policies for hazardous waste, solid waste, and water pollution. It has appeared in the *RAND Journal of Economics*, *Journal of Environmental Economics and Management*, *Journal of Law and Economics*, *Land Economics*, and *Journal of Legal Studies*, as well as in several books, and is forthcoming in the *American Economic Review*. Her current research on transboundary spillovers and water pollution in rivers is funded by the National Science Foundation. Other research support comes from the U.S. Environmental Protection Agency, University of California, Los Angeles, Woods Hole Oceanographic Institution, and fellowship support from the sources mentioned above.